

## **CLAIMS**

**1. (Currently Amended)** A method implemented on a device by a processing unit configured to execute computer-executable instructions that, when executed by the processing unit, direct the device to perform acts comprising:

obtaining audio/video data from a disc;

presenting the audio/video data to a user;

obtaining a set of executable software instructions from the disc;

receiving an input from the user; and

executing, in response to the input, one or more instructions of the set of executable software instructions to determine how to enhance presentation of the audio/video data currently being played back to the user, wherein executing the one or more instructions of the set of executable software instructions comprises:

identifying a temporal location of the audio/video data currently being played back;

identifying programmatic data corresponding to the identified temporal location; and

enhancing a presentation of the audio/video data by using the identified programmatic data associated with the disc as determined by executing the one or more instructions of the set of executable software instructions, wherein the programmatic data including additional data and adding additional details, which do not exist in the audio/video data, to the audio/video data, the programmatic data comprising comprises:

2D information comprising data for rendering a viewpoint absent from that does not exist in the audio/video data;

markup data identifying a plot of the audio/video data;

data identifying an enhanced functionality corresponding to different input and output devices;

informational data comprising biographies and filmographies;

data identifying which content is to be displayed for different rating levels;

and

different display format data comprising:

a National Television Standards Committee (NTSC) format or a Phase Alternating Line (PAL) format;

a widescreen format, a letter box format, or a pan and scan format;

and

a standard definition format or a High Definition Television HDTV format.

**2. (Original)** A method as recited in claim 1, further comprising:

obtaining the programmatic data from the disc.

**3. (Original)** A method as recited in claim 1, further comprising:

obtaining the programmatic data from a local storage device.

**4. (Original)** A method as recited in claim 1, further comprising:  
obtaining the programmatic data from a remote storage device.

**5. (Original)** A method as recited in claim 1, wherein the user input comprises a user input requesting an action be taken regarding playback of the audio/video data.

**6. (Canceled)**

**7. (Currently Amended)** A method implemented on a playback device by a processing unit configured to execute computer-executable instructions that, when executed by the processing unit, direct the playback device to perform acts comprising:

obtaining, from a source, audio/video data for a presentation to a user;

obtaining, from the source, a set of executable instructions associated with the audio/video data, wherein the set of executable instructions are loaded by the playback device when the source is initially accessible to the playback device;

obtaining programmatic data associated with the audio/video data, wherein:

the programmatic data includes additional data and adds additional details to the audio/video data; and

temporal location identifiers from a stream of the audio/video data identify associated programmatic data;

executing the set of executable instructions by the processing unit in conjunction with presenting the audio/video data to the user; and

enhancing the presentation of the audio/video data to the user based on the programmatic data processed by the playback device.

**8. (Original)** A method as recited in claim 7, wherein obtaining the programmatic data comprises obtaining the programmatic data from the source.

**9. (Original)** A method as recited in claim 7, wherein the source comprises a DVD.

**10. (Original)** A method as recited in claim 7, wherein the enhancing comprises improving the quality of the video data of the audio/video data.

**11. (Original)** A method as recited in claim 7, wherein the enhancing comprises creating an HDTV (High Definition TV) version of the video data of the audio/video data.

**12. (Original)** A method as recited in claim 7, wherein the enhancing comprises converting the video data of the audio/video data to a different aspect ratio.

**13. (Original)** A method as recited in claim 7, wherein the enhancing comprises incorporating popup information into the video data of the audio/video data.

**14. (Original)** A method as recited in claim 7, wherein the enhancing comprises displaying popup information when playback of the audio/video data is paused.

**15. (Original)** A method as recited in claim 7, wherein the enhancing comprises allowing the user to scan through important scenes of the audio/video data, wherein the important scenes are identified in the programmatic data.

**16. (Original)** A method as recited in claim 7, wherein the enhancing comprises presenting, to the user, a summary of important scenes of the audio/video data up to a particular point in the audio/video data.

**17. (Original)** A method as recited in claim 7, wherein the enhancing comprises allowing the user to access additional episodic content associated with the audio/video data.

**18. (Previously Presented)** A method as recited in claim 7, wherein the enhancing comprises:

improving the quality of video data of the audio/video data;

creating an HDTV (High Definition TV) version of the video data of the audio/video data;

converting the video data of the audio/video data to a different aspect ratio;

incorporating popup information into the video data of the audio/video data;

displaying popup information when playback of the audio/video data is paused;

allowing the user to scan through important scenes of the audio/video data, wherein the important scenes are identified in the programmatic data;

presenting, to the user, a summary of important scenes of the audio/video data up to a particular point in the audio/video data; and

allowing the user to access additional episodic content associated with the audio/video data.

**19. (Currently Amended)** A method implemented on a device by a processing unit configured to execute computer-executable instructions that, when executed by the processing unit, direct the device to perform acts comprising:

receiving audio/video content for playback;

receiving programmatic data associated with the audio/video content, wherein the programmatic data includes additional data and adds additional details to the audio/video data; and temporal location identifiers from a stream of the audio/video data identify associated programmatic data and the programmatic data comprises information describing an enhancement to the audio/video content to generate an enhanced audio/video content by adding the programmatic data to the audio/video content;

receiving a set of instructions to enhance playback of the audio/video content;

executing the set of instructions by the processing unit, wherein executing the set of that instructions causes the device to process the programmatic data; and generating the enhanced audio/video content.

**20. (Original)** A method as recited in claim 19, wherein the audio/video content and the set of instructions are both received from a same source.

**21. (Original)** A method as recited in claim 20, wherein the same source comprises a DVD.

**22. (Original)** A method as recited in claim 19, wherein the receiving programmatic data comprises receiving the programmatic data from a local storage device.

**23. (Original)** A method as recited in claim 19, wherein the receiving programmatic data comprises receiving the programmatic data from a remote device.

**24. (Previously Presented)** A method as recited in claim 19, wherein the enhancement comprises improving a quality of video data of the audio/video content.

**25. (Previously Presented)** A method as recited in claim 19, wherein the enhancement comprises creating an HDTV (High Definition TV) version of video data of the audio/video content.

**26. (Previously Presented)** A method as recited in claim 19, wherein the enhancement comprises converting video data of the audio/video content to a different aspect ratio.

**27. (Previously Presented)** A method as recited in claim 19, wherein the enhancement comprises overlaying popup information on video data of the audio/video content.

**28. (Original)** A method as recited in claim 19, wherein the enhancement comprises displaying popup information when playback of the audio/video content is paused.

**29. (Original)** A method as recited in claim 19, wherein the enhancement comprises allowing the user to scan through important scenes of the audio/video content, wherein the important scenes are identified in the programmatic data.

**30. (Original)** A method as recited in claim 19, wherein the enhancement comprises presenting, to the user, a summary of important scenes of the audio/video content up to a particular point in the audio/video content.

**31. (Original)** A method as recited in claim 19, wherein the enhancement comprises allowing the user to access additional episodic content associated with the audio/video content.

**32. (Currently Amended)** One or more computer readable storage media having stored thereon a plurality of instructions that, when executed by one or more processors, causes the one or more processors to:



access audio/video content obtained from a digital versatile disc (DVD);

identify a current portion of the audio/video content being played back;

identify programmatic data that corresponds to the current portion of the audio/video content being played back, wherein: the programmatic data includes additional data and adds additional details to the audio/video data and temporal location identifiers from a stream of the audio/video content identify associated programmatic data; and

enhance a presentation of the current portion of the audio/video content based at least in part on the identified programmatic data, wherein executing the plurality of instructions causes the one or more processors to process the programmatic data to enhance a presentation of the current portion of the audio/video content.

**33. (Previously Presented)** One or more computer readable storage media as recited in claim 32, wherein the programmatic data is also obtained from the DVD.

**34. (Previously Presented)** One or more computer readable storage media as recited in claim 32, wherein the one or more computer readable storage media comprises the DVD.

**35. (Previously Presented)** One or more computer readable storage media as recited in claim 32, wherein the programmatic data includes a plurality of different portions and the audio/video content includes a plurality of different portions, and

wherein different portions of the programmatic data correspond to different portions of the audio/video content.

**36. (Currently Amended)** A computer readable storage media having stored thereon a data structure, comprising:

a first portion containing audio data and video data that, when played back, generates an audio/video content stream;

a second portion containing associated programmatic data, wherein: the programmatic data includes additional data and adds additional details to the audio/video data and temporal location identifiers from the audio data and video data identify the associated programmatic data; and

a third portion containing a plurality of instructions for processing the associated programmatic data, wherein the plurality of instructions, when executed, cause processing of the programmatic data, and the programmatic data to process is determined based on a current location of the audio/video content stream being played back.

**37. (Previously Presented)** A computer readable storage media as recited in claim 36, wherein the associated programmatic data is processed to improve a quality of the video data.

**38. (Previously Presented)** A computer readable storage media as recited in claim 36, wherein the associated programmatic data is processed to create an HDTV (High Definition TV) version of the video data.

**39. (Previously Presented)** A computer readable storage media as recited in claim 36, wherein the associated programmatic data is processed to convert the video data to a different aspect ratio.

**40. (Previously Presented)** A computer readable storage media as recited in claim 36, wherein the associated programmatic data is processed to incorporate popup information into the video data.

**41. (Previously Presented)** A computer readable storage media as recited in claim 36, wherein the associated programmatic data is processed to display popup information when playback of the audio data and video data is paused.

**42. (Previously Presented)** A computer readable storage media as recited in claim 36, wherein the associated programmatic data is processed to allow the user to scan through important scenes of the audio data and video data, wherein the important scenes are identified in the associated programmatic data.

**43. (Previously Presented)** A computer readable storage media as recited in claim 36, wherein the associated programmatic data is processed to present, to the

user, a summary of important scenes of the audio data and video data up to a particular point in the audio data and video data.

**44. (Previously Presented)** A computer readable storage media as recited in claim 36, wherein the associated programmatic data is processed to allow the user to access additional episodic content associated with the audio data and video data.

**45. (Currently Amended)** A method performed by a processing unit of a playback device configured to execute computer-executable instructions that, when executed by the processing unit, direct the playback device to perform acts comprising:

obtaining audio/video content to be presented to a user;

obtaining programmatic data associated with the audio/video content; and

responsive to an input from the user, executing a set of instructions by the processing unit of the playback device in conjunction with playing back the audio/video data, wherein the instructions are loaded by the playback device when the audio/video content is initially accessible to the playback device, wherein:

the set of instructions use the programmatic data to improve a quality of the video of the audio/video content;

~~and the programmatic data includes additional data and adds additional details to the audio/video data; and~~

the programmatic data comprises:

2D information comprising data for rendering a viewpoint ~~absent from~~ that does not exist in the audio/video data;

markup data identifying a plot of the audio/video data;  
data identifying an enhanced functionality corresponding to different input and output devices coupled to the playback device;  
informational data comprising biographies and filmographies;  
data identifying which content is to be displayed for different rating levels; and  
different display format data comprising:  
a National Television Standards Committee (NTSC) format or a Phase Alternating Line (PAL) format;  
a widescreen format, a letter box format, or a pan and scan format; and  
a standard definition format or a High Definition Television HDTV format.

**46. (Previously Presented)** A method as recited in claim 45, wherein the set of instructions, the audio/video content, and the programmatic data are all obtained from a same DVD.

**47. (Currently Amended)** A method implemented on a device by a processing unit configured to execute computer-executable instructions that, when executed by the processing unit, direct the device to perform acts comprising:  
obtaining audio/video content to be presented to a user;  
obtaining programmatic data associated with the audio/video content, wherein temporal location identifiers from a stream of the audio/video content identify associated programmatic data; and

executing, by the processing unit, a set of executable instructions that causes processing of the programmatic data to create an HDTV (High Definition TV) version of a video of the audio/video content by adding additional detail based on the programmatic data, wherein the programmatic data includes additional data and adds additional details to the audio/video data and the programmatic data comprises:

additional information describing regions of the HDTV version absent from the audio/video content due to an aspect ratio difference between the video of the audio/video content and the HDTV version; and

data describing a difference between a picture quality of the video of the audio/video content and an increased picture quality for the HDTV version.

**48. (Previously Presented)** A method as recited in claim 47, wherein the set of executable instructions, the audio/video content, and the programmatic data are all obtained from a same DVD.

**49. (Currently Amended)** A method implemented on a device by a processing unit configured to execute computer-executable instructions that, when executed by the processing unit, direct the device to perform acts comprising:

obtaining audio/video content having a first aspect ratio to be presented to a user;

obtaining programmatic data associated with the audio/video content, wherein the programmatic data includes additional data and adds additional details to the

audio/video data and temporal location identifiers from a stream of the audio/video content identify associated programmatic data; and

executing, by the processing unit, a set of instructions that use the programmatic data to convert the video of the audio/video content from the first aspect ratio to a second aspect ratio having at least one dimension smaller than the first aspect ratio by removing at least one of rows of pixels or columns of pixels from the audio/video content, wherein the programmatic data identifies which rows of pixels or columns of pixels to remove for each image of a video track of the audio/video content.

**50. (Previously Presented)** A method as recited in claim 49, wherein the set of instructions, the audio/video content, and the programmatic data are all obtained from a same DVD.

**51. (Currently Amended)** A method implemented on a device by a processing unit configured to execute computer-executable instructions that, when executed by the processing unit, direct the device to perform acts comprising:

obtaining audio/video content to be presented to a user;

obtaining programmatic data associated with the audio/video content, wherein the programmatic data includes additional data and adds additional details to the audio/video data and temporal location identifiers from a stream of the audio/video content identify associated programmatic data; and

executing, by the processing unit, a set of instructions that use the programmatic data to incorporate popup information into video content of the audio/video content,

wherein the popup information overlays the audio/video content and comprises descriptions of items displayed as part of the audio/video content that overlay the video content and a link that, when selected by the user, allows the user to purchase an item being displayed as part of the audio/video content.

**52. (Canceled)**

**53. (Previously Presented)** A method as recited in claim 51, wherein the popup information includes images overlaying the video content.

**54. (Previously Presented)** A method as recited in claim 51, wherein the popup information includes text overlaying the video content.

**55. (Previously Canceled)**

**56. (Previously Presented)** A method as recited in claim 51, wherein the set of instructions, the audio/video content, and the programmatic data are all obtained from a same DVD.

**57. (Currently Amended)** A method performed by a processing unit of a content player, the processing unit configured to execute computer-executable instructions that, when executed by the processing unit, direct the content player to perform acts comprising:



obtaining audio/video content having a unique identifier, the audio/video content to be presented to a user;

obtaining programmatic data associated with the audio/video content, wherein: the programmatic data includes additional data and adds additional details to the audio/video data and temporal location identifiers from a stream of the audio/video content identify associated programmatic data;

executing, by the processing unit, a set of instructions associated with the unique identifier, wherein the instructions when executed, cause the programmatic data to display popup information when playback of the audio/video content is paused; and

storing an association between the unique identifier and the set of instructions in a memory of the content player.

**58. (Original)** A method as recited in claim 57, wherein the popup information includes images overlaying the video.

**59. (Original)** A method as recited in claim 57, wherein the popup information includes text overlaying the video.

**60. (Previously Presented)** A method as recited in claim 57, wherein the popup information includes a link that, when selected by the user, allows the user to purchase an item being displayed as part of the audio/video content.

**61. (Previously Presented)** A method as recited in claim 57, wherein the set of instructions, the audio/video content, and the programmatic data are all obtained from a same DVD.

**62. (Previously Presented)** A method implemented on a device by a processing unit configured to execute computer-executable instructions that, when executed by the processing unit, direct the device to perform acts comprising:

obtaining audio/video content to be presented to a user;

obtaining programmatic data associated with the audio/video content, wherein temporal location identifiers from a stream of the audio/video content identify associated programmatic data and the programmatic data includes additional data and adds additional details to the audio/video data and the programmatic data comprises data identifying important scenes of the audio/video content that are important to a plot of the audio/video content; and

executing a set of instructions that, when executed, present, to the user, the important scenes of the audio/video content as identified by the programmatic data, wherein the device scans through the important scenes in response to a user request.

**63. (Previously Canceled)**

**64. (Previously Presented)** A method as recited in claim 62, wherein the programmatic data further comprises data identifying scenes of the audio/video content that are important to a sub-plot of the audio/video content, and wherein the device

scans through the scenes of the audio/video content that are important to the sub-plot in response to the user request.

**65. (Previously Presented)** A method as recited in claim 62, wherein the device scans through the important scenes by jumping to a next important scene of a plurality of important scenes in response to the user request.

**66. (Previously Presented)** A method as recited in claim 62, wherein the user request comprises activation of a scan button on an input device by the user.

**67. (Previously Presented)** A method as recited in claim 62, wherein the device plays back a plurality of important scenes in response to a single user request.

**68. (Previously Presented)** A method as recited in claim 62, wherein the set of instructions, the audio/video content, and the programmatic data are all obtained from a same DVD.

**69. (Currently Amended)** A method implemented on a device by a processing unit configured to execute computer-executable instructions that, when executed by the processing unit, direct the device to perform acts comprising:

obtaining audio/video content to be presented to a user;

obtaining programmatic data associated with the audio/video content, wherein temporal location identifiers from a stream of the audio/video content identify associated

programmatic data and the programmatic data includes additional data and adds additional details to the audio/video data and the programmatic data comprises data identifying important scenes of the audio/video content that are important to a plot of the audio/video content; and

executing a set of instructions that, when executed by the processing unit, present, to the user, a summary of the important scenes of the audio/video content as identified by the programmatic data up to a particular point in the audio/video content.

**70. (Previously Presented)** A method as recited in claim 69, wherein the particular point in the audio/video content comprises a point at which the user indicates playback of the audio/video content is to begin.

**71. (Original)** A method as recited in claim 69, further comprising:  
determining a position in the audio/video content where playback of the audio/video content last stopped; and  
using the position as the particular point.

**72. (Previously Presented)** A method as recited in claim 69, wherein the set of instructions, the audio/video content, and the programmatic data are all obtained from a same DVD.

**73. (Currently Amended)** A method implemented on a device by a processing unit configured to execute computer-executable instructions that, when executed by the processing unit, direct the device to perform acts comprising:

obtaining audio/video content to be presented to a user;

obtaining programmatic data associated with the audio/video content, wherein;  
the programmatic data includes additional data and adds additional details to the audio/video data and temporal location identifiers from a stream of the audio/video content identify associated programmatic data;

executing a set of instructions that, when executed by the processing unit, present, to the user, additional episodic content associated with the audio/video content, wherein the programmatic data identifies the additional episodic content; and

charging a fee for access to the additional episodic content.

**74. (Original)** A method as recited in claim 73, wherein the additional episodic content includes additional scenes of the audio/video content.

**75. (Original)** A method as recited in claim 73, wherein the additional episodic content comprises an additional audio track associated with the audio/video content.

**76. (Previously Canceled)**

**77. (Previously Presented)** A method as recited in claim 73, wherein the set of instructions, the audio/video content, and the programmatic data are all obtained from a same DVD.

**78. (Previously Presented)** A system comprising:

a processor;

a memory coupled to the processor and configured to store a plurality of modules;

an audio/video playback module configured to receive a stream of audio/video content for playback; and

a programmatic data control module configured to:

receive programmatic data associated with the audio/video content, the programmatic data including additional data and adding additional details to the audio/video data;

monitor the stream of the audio/video content for temporal location identifiers to associate the programmatic data with the audio/video content; and

enhance a playback of the audio/video content by adding the programmatic data to the audio/video content, wherein the programmatic data and the audio/video content are part of a same data stream received from a same source.

**79. (Previously Presented)** A system as recited in claim 78, wherein the the adding the programmatic data comprises:

improving the quality of video data of the audio/video content;

creating an HDTV (High Definition TV) version of the video data of the audio/video content;

converting the video data of the audio/video content to a different aspect ratio;

incorporating popup information into the video data of the audio/video content;

displaying popup information when playback of the audio/video content is paused;

allowing the user to scan through important scenes of the audio/video content, wherein the important scenes are identified in the programmatic data;

presenting, to the user, a summary of important scenes of the audio/video content up to a particular point in the audio/video content; and

allowing the user to access additional episodic content associated with the audio/video content.

**80. (Previously Presented)** A system as recited in claim 78, wherein the programmatic data control module, the programmatic data, and the audio/video content are received from a same DVD.

**81. (New)** A method as recited in claim 1, wherein the programming data includes additional tracks or streams that, when combined with the audio/video data, improves quality of audio/video data.

**82. ( New)** A method as recited in claim 1, wherein the programming data includes data that allows a user to take over control of an character's action in the audio/video data without changing a linear story represented by the audio/video data.